(b) whether the Government have formulated any scheme to use solar energy for irrigation purposes in Uttar Pradesh, Bihar, Madhya Pradesh etc;

(c) if so, the details thereof and if not, the reasons therefor;

(d) the total solar energy generated in the country at present and the capacity likely to be added thereto in the near future;

(e) the details of items prepared or likely to be prepared with the solar energy; and

(f) the efforts being made to formulate a special scheme for benefit of the villagers?

THE MINISTER OF STATE OF THE MINISTRY OF NON-CONVENTIONAL ENERGY SOURCES (CAPT. JAI NARAIN PRASAD NISHAD : (a) Solar energy can be used through two major technology routes, solar thermal route for heating and cooling applications and solar photovoltaic (PV) route for direct generation of electricity. India is one of the leading nations in the world in the production and utilisation of solar thermal and photovoltaic products. India is the largest user of solar cookers. Surveys conducted by some independent consultants have shown India as the second largest producer of photovoltaic modules based on single crystalline silicon solar cells. During the financial year 1997-98, an amount of Rs. 58.50 crores has been provided in the central budged for this sector.

(b) and (c) Government is implementing a programme for the applicationof solar photovoltaic water pumping systems for agriculture and related uses. Under this scheme, which is implemented through Indian Renewable Energy Development Agency, manufacturers, suppliers and financial intermediaries can directly market solar pumps throughout the country, including the States of Uttar Pradesh, Bihar and Madhya Pradesh. The solar pumps are sold with a soft loan and subsidy arrangement. present rate of subsidy is Rs. 125 per watt of solar photovoltaic array capacity subject to a maximum of Rs. 1,50,000. Depending on the capacity of the solar pump, a soft loan in the range of Rs. 50,000-Rs. 1,00,000 is available at 5% annual interest rate, repayable over a period of 10 years. A total of 2,159 solar PV water pumping systems have been installed under this programme.

(d) By the end of 8th Five year Plan about 28 MW of solar photovoltaic systems have been deployed. This is estimated to generate about 42 million kwh per year. About 380,000 sq. m. of solar thermal collector area for use in water heating has also been instlled in the country and is estimated to save about 256 million kwh (thermal) energy per year. In addition, about 4,35,000 solar cookers, capable of saving 1.3 million LPG cylinders per year, have also been deployed.

The Ninth Five Year Plan proposals envisage deployment of 100 MW capacity of solar PV systems, 1.5 million sq. m. solar thermal collector area and 5 lakh solar cookers.

(e) Solar Energy systems currently in use based on the solar photovoltaic route include solar lanterns, street lights, domestic lights, village power plants, water pumping systems and a variety of other applications in telecommunications, railways, off-shore oil platforms, TV transmission, battery charging etc. Solar PV systems which have potential for large scale use include medical refrigerators, solar powered water desalination systems and grid connected solar power plants etc.

Solar Thermal system currently in use include solar water heaters for applications in domestic, industrial and commercial sectors, solar cookers as supplementing cooking device, solar air heaters/dryers and solar stills. Energy efficient buildings based on solar passive architecture have been demonstrated. Efforts are in progress to develop solar systems for industrial process heat and power generation. A 140 MW integrated solar combined cycle power plant with solar thermal power generation capacity of 35 MW is likely to be taken up for installation in Rajasthan.

(f) Government has formulated programmes on decentralised solar energy systems like solar lanterns, domestic lighting systems, village power plants and solar pumps primarily for the benefit of the villagers. Subsidies are provided to users of these systems.

[English]

Running of Shuttle Between Neemach and Ratlam

2491. DR. LAXMINARAYAN PANDEY : Will the Minister of RAILWAYS be pleased to state :

(a) whether any requests have been made for starting of a shuttle between Neemach and Ratlam under Ratlam Division in Western Railway by the residents of that area;

(b) if so, the details thereof;

(c) whether the General Manager (W.R.) has assured for the same; and

(d) if so, the time by which it is likely to be effected?

THE MINISTER OF RAILWAYS (SHRI RAM VILAS PASWAN) : (a) and (b) Some representations including from Dr. Laxminarayan Pandey, MP have been received in this regard.

(c) No, Sir.

(d) Does not arise.

Seal on Letters

2492. SHRI K. PARASURAMAN : Will the Minister of COMMUNICATIONS be pleased to state :

(a) whether the complaints have been received that date and place of posting as well as receiving place have